18526

SOUNDINGS IN FEET

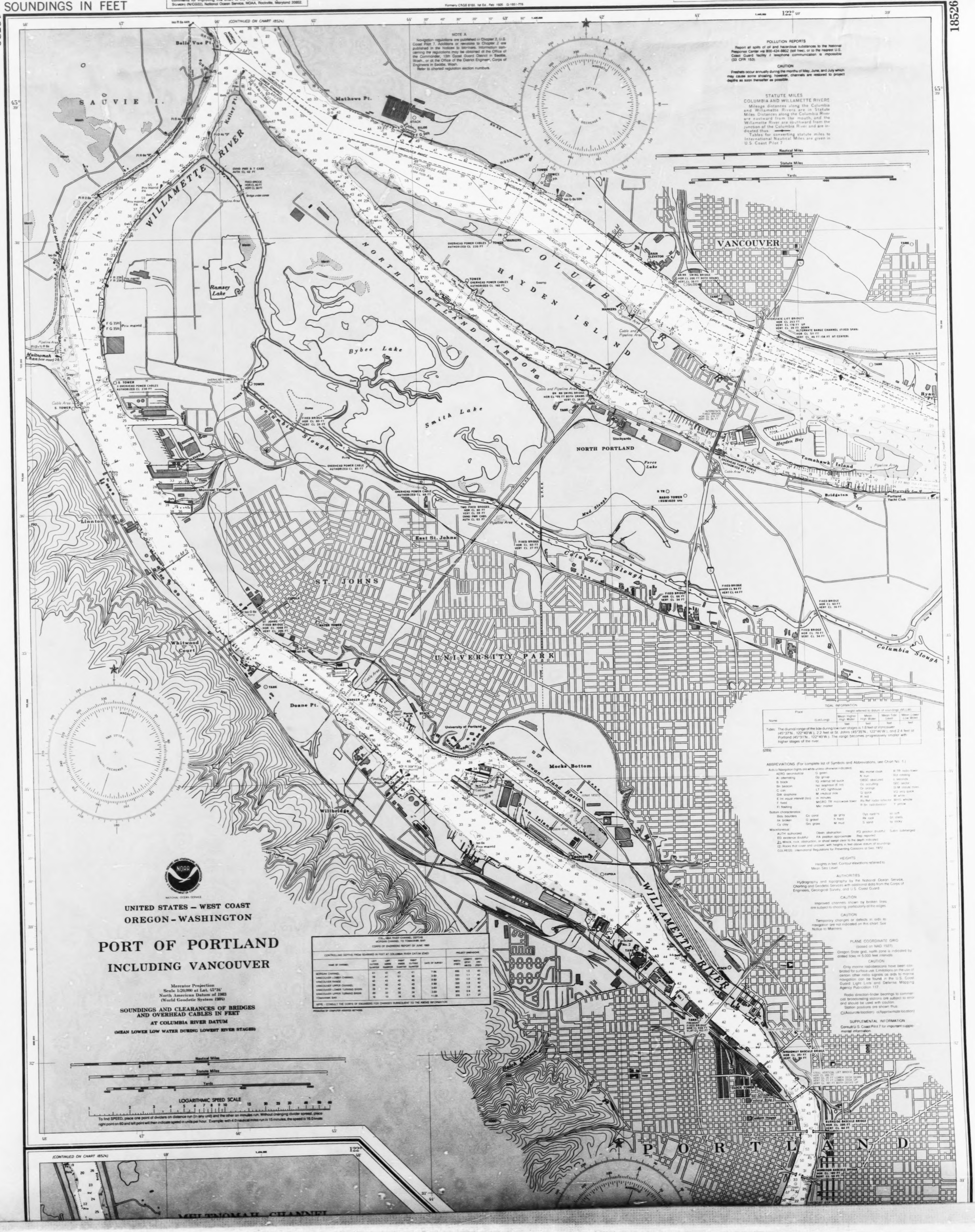
This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Director, Charting and Geodetic Services (N/CG22), National Ocean Service, NOAA, Rockville, Maryland 20852.

Formerly C&GS 6155, 1st Ed., Feb. 1925 G-1951-778

CAUTION
CHANGES in BUOYAGE

Mariners are advised that authorized aids to navigation are being changed to conform to maritime standards of the International Association of Lighthouse Authorities Maritime Buoyage System, Region B. Significant changes are: black port hand buoys to green; black and white vertically striped buoys to red and white vertically striped buoys; and lateral lights from white to red or green as appropriate. Changes to aids to navigation will be announced in the Defense Mapping Agency Hydrographic/Topographic Center weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

Nautical Chart Catalog No. 2, Panel G



NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Wash., or at the Office of the District Engineer, Corps of Engineers in Seattle, Wash.

Refer to charted regulation section numbers.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

Freshets occur annually during the months of May, June, and July which may cause some shoaling; however, channels are restored to project depths as soon thereafter as possible.

STATUTE MILES
COLUMBIA AND WILLAMETTE RIVERS

Mileage distances along the Columbia and Willamette Rivers are in Statute Miles. Distances along the Columbia River are eastward from the mouth, and the Willamette River are southward from the junction of the Columbia River and are indicated thus: ——•——

Tables for converting statute miles to International Nautical Miles are given in U.S. Coast Pilot 7.

Nautical Miles

Statute Miles

Yards

TIDAL INFORMATION

Place		Height referred to datum of soundings (MLLW)			
Name	(Lat/Long)	Mean Higher High Water	Mean High Water	Mean Tide Level	Mean Lower Low Water
		feet	feet	feet	feet

Tides: The diurnal range of the tide during low river stages is 1.8 feet at Vancouver (45°37'N., 122°40'W.), 2.2 feet at St. Johns (45°35'N., 122°46'W.), and 2.4 feet at Portland (45°31'N., 122°40'W.). The range becomes progressively smaller with higher stages of the river.

(289)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):
AERO aeronautical
Al alternating
B black
Bn beacon
C can
DIA diaphone
E Int equal interval (Iso)
F fixed
Fl flashing
G green
Gp group
IQ interrupted quick
Iso isophase (E Int)
LT HO lighthouse
Mi nautical mile
m minutes
MICRO TR microwave tower
Mkr marker
Mo morse code
N nun
OBSC obscured
Oc occulting
Or orange
Q quick
R red
Ra Ref radar reflector
R Bn radiobeacon
R TR radio tower
Rot rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
WHIS whistle
Y yellow

Bottom characteristics:
Bids boulders
bk broken
Cy clay
Co coral
G gravel
Grs grass
gy gray
h hard
M mud
Oys oysters
Rk rock
S sand
so soft
Sh shells
sy sticky

Miscellaneous:
AUTH authorized
ED existence doubtful
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Subm submerged
21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated
(2) Rocks that cover and uncover, with heights in feet above datum of soundings
COLREGS: International Regulations for Preventing Collisions at Sea, 1972

HEIGHTS

Heights in feet. Contour elevations referred to Mean Sea Level.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

PLANE COORDINATE GRID
(based on NAD 1927)

Oregon State grid, north zone is indicated by dotted ticks at 5,000 feet intervals.

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

NATIONAL OCEAN SERVICE

UNITED STATES – WEST COAST
OREGON – WASHINGTON

PORT OF PORTLAND
INCLUDING VANCOUVER

Mercator Projection
Scale 1:20,000 at Lat. 45°34'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS AND CLEARANCES OF BRIDGES AND OVERHEAD CABLES IN FEET
AT COLUMBIA RIVER DATUM
(MEAN LOWER LOW WATER DURING LOWEST RIVER STAGES)

COLUMBIA RIVER CHANNEL DEPTHS
MORGAN CHANNEL TO TOMAHAWK BAR
CORPS OF ENGINEERS REPORT OF JUNE [illegible]

NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
MORGAN CHANNEL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VANCOUVER LOWER CHANNEL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VANCOUVER RANGE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VANCOUVER UPPER CHANNEL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VANCOUVER LOWER TURNING BASIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VANCOUVER UPPER TURNING BASIN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOMAHAWK BAR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

PRODUCED BY COMPUTER ASSISTED METHODS

Nautical Miles

Statute Miles

Yards

LOGARITHMIC SPEED SCALE

To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

(CONTINUED ON CHART 18524)

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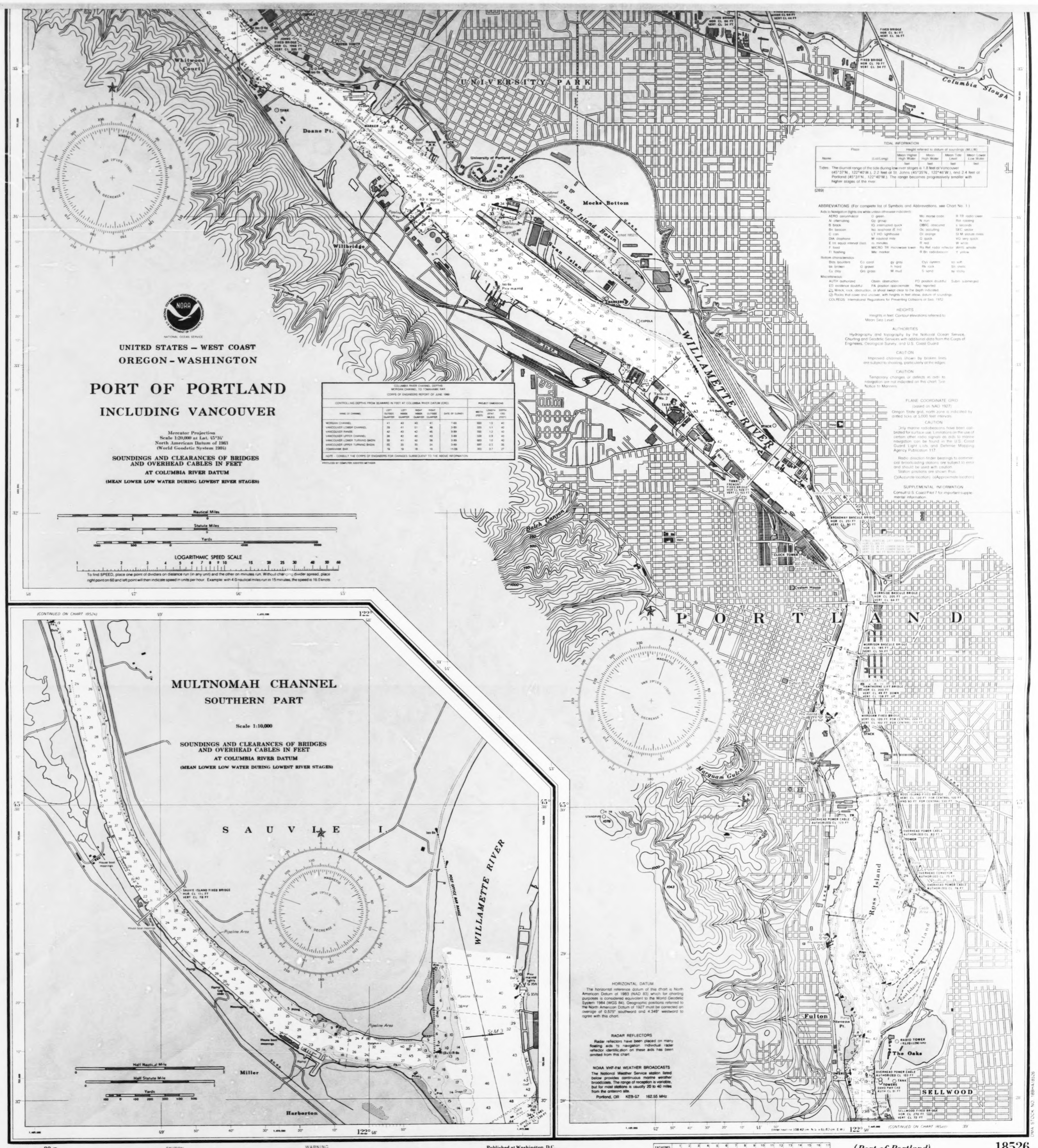

UNITED STATES – WEST COAST
OREGON – WASHINGTON

PORT OF PORTLAND
INCLUDING VANCOUVER

Mercator Projection
Scale 1:20,000 at Lat. 45°34′
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS AND CLEARANCES OF BRIDGES AND OVERHEAD CABLES IN FEET
AT COLUMBIA RIVER DATUM
(MEAN LOWER LOW WATER DURING LOWEST RIVER STAGES)

LOGARITHMIC SPEED SCALE

MULTNOMAH CHANNEL
SOUTHERN PART

Scale 1:10,000

SOUNDINGS AND CLEARANCES OF BRIDGES AND OVERHEAD CABLES IN FEET
AT COLUMBIA RIVER DATUM
(MEAN LOWER LOW WATER DURING LOWEST RIVER STAGES)

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.575" southward and 4.349" westward to agree with this chart.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOAA VHF-FM WEATHER BROADCASTS

The National Weather Service station listed below provides continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Portland, OR KEB-97 162.55 MHz

45th Ed., Sept. 9/89 ■

18526

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

(Port of Portland)
SOUNDINGS IN FEET - SCALE 1:20,000

18526

SOUNDINGS IN FEET

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C 55.418/7: